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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/06/2006

Joseph Da Cruz

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EXAMINER

MAI, HAO D

ART UNIT

PAPER NUMBER

3732

MAIL DATE

DELIVERY MODE

04/14/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/573,986	Applicant(s) DA CRUZ, JOSEPH	
	Examiner HAO D. MAI	Art Unit 3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24,25,28-35 and 44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24,25,28-35 and 44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 2008 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Australia on 10/03/2003. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 24, and 28-35, and 44, are rejected under 35 U.S.C. 103(a) as being unpatentable over Chikami (6,332,774) in view of Fisher (4,026,023).**

Regarding claim 24, Chikami discloses a removable dental appliance (Fig. 7) having a base 1 for locating inside an arch of teeth of a wearer and an arch wire 2 coupled to the base 1. An outer surface of the base shown being contoured for contact with inner surfaces of the teeth, arranged such that when in use the arch wire 2 extends around an outer periphery of a set of the wearer's teeth. Note the interconnection 3 between the arch wire and base. The arch wire 2 extends from one side posterior portion of the base (area 3 on one side) to the other side posterior portion of the base (area 3 on the other side) for contact with outer surfaces of the set of teeth along an outside of the arch of teeth. The arch wire is shown as extending from the posterior portions indirectly, generally rearwardly and outwardly relative to the wearer when in

Art Unit: 3732

situ, to the set of teeth in bent portions 2a of wire on each side of the base. The bent portions 2a are capable of allowing flexure of the wire at the bent portions, promoting limited movement of the arch wire relative to the base.

Chikami discloses the invention substantially as claimed. However, Chikami shows the interconnection 3 between the wire and base is somewhat touching the most posterior teeth. Nevertheless, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Chikami by relocating the interconnection 3 between the base and the arch wire more towards the posterior and the center of the base such that the interconnection do not touch the teeth so that it would not irritate and/or damage the wearer's teeth. Such rearrangement of parts/connections is merely a design choice well within the skill of an artisan obtained via routine experimentation in order to achieve optimum results. *In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950). MPEP 2144.04.

Chikami fails to disclose an expansion screw. Fisher discloses a removable orthodontic appliance having a base with two parts and an expansion screw 32 (Fig. 2) for expanding the base. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Chikami by substituting Chikami's base with Fisher's two-part base with an expansion screw so that the base can be expanded as it adjust to the new position(s) of the teeth.

As to claims 28-29, the dental appliance as disclosed by Chikami is capable of being used for the upper jaw; and the arch wire extending continuously from side to side of the base as claimed. As to claims 30-32, Figure 11 shows the arch wire incorporating four U-loops 2a (the other two is located on the other side) and a C-clasp 3 is coupled to the arch wire at only one end portion of the C-clasp. As to claims 33-35, base 1 is capable of being an anterior and/or posterior bite plane, i.e. the upper teeth can bite on the base if it is located at the lower

Art Unit: 3732

jaw, and the lower teeth can bite on the base if it is located at the upper jaw. As to claim 44, Chikami discloses the arch wire extend from side to side of the base forming a closed circuit. Fisher discloses at least arch wire 30 extending side to side within the base to the expansion screw, forming a closed circuit. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the arch wire extend to the incorporated expansion screw, forming a closed circuit, as taught by Fisher in order for the expansion screw to exert direct force onto the arch wire.

4. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chikami in view of Fisher and further in view of Aagesen (5,002,485).

Chikami/Fisher disclose the invention substantially according to claim 24. However, Chikami/Fisher fails to disclose a 3-way expansion screw mechanism.

Aagesen discloses an orthodontic appliance having a three-part base 12/14/16 with a 3-way expansion screw mechanism 20 capable of enlarging the maxilla of the wearer in left, right, and anterior directions (Figs. 1-2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Chikami/Fisher by including the three-part base with the 3-way expansion screw mechanism so that the base may be expanded in three directions as explicitly taught by Aagesen.

Response to Arguments

5. Applicant's arguments filed 12/30/2008 have been fully considered but they are not persuasive. Applicant argued that Chikami does not disclose the arch wire exits the posteriors on each side of the base at locations spaced from the arch of teeth. As noted in the previous and this instant office action, Chikami shows the interconnection 3 between the wire and base is

Art Unit: 3732

somewhat touching, albeit very minimally, the most posterior teeth (Fig. 7). Nevertheless, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Chikami by relocating the interconnection 3 between the base and the arch wire more towards the posterior and the center of the base such that the interconnection do not touch and spaced from the teeth in order to not irritate and/or damage the wearer's teeth. Such rearrangement of parts/connections is merely a design choice well within the skill of an artisan obtained via routine experimentation in order to achieve optimum results. *In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950). MPEP 2144.04.

Applicant emphasizes that Chikami discloses a conventional rigid and restrictive configuration. However, it is maintained that Chikami discloses the bent portions 2a (Figs. 7 and 11) which act like a spring mechanism and thus is capable of giving the device at least some flexibility as claimed.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 3732

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HAO D. MAI whose telephone number is (571)270-3002. The examiner can normally be reached on Monday-Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached on (571) 272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hao D Mai/
Examiner, Art Unit 3732

/Cris L. Rodriguez/
Supervisory Patent Examiner, Art Unit 3732